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10/631,279	07/31/2003	Keith A. Ranieri	FIRS-2992	3766
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EXAMINER				
UTAMA, ROBERT J				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/631.279

Applicant(s)

RANIERE, KEITH A.

Examiner

ROBERT J. UTAMA

Art Unit

3715

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/24/2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of the application

1. This office action is a response to the amendment and arguments submitted on 02/18/2011. The current statuses of the claim in the application are as follows: claims 1, 4-8 are still pending and claims 2-3 and 9-33 have been cancelled.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1, 4-8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A process claimed is considered to be directed to a statutory subject matter if it can be shown that the claimed process:

- be tied to a particular machine or apparatus (machine implemented); or
- particularly transform a particular article to a different state or thing.

Additionally, the particular machine tie or particular transformation must meet two corollaries to pass the test for subject matter eligibility. First, the use of the particular machine or transformation of the particular article must impose a **meaningful limit** on the claim's scope. So, a machine tie in only a field-of-use limitation would not be sufficient. Second, the use of the particular machine or the transformation of the particular article must involve **more than insignificant "extra-solution" activity**. In this particular case, the limitation of claim 1 is not tied to a machine or an apparatus. While the method uses an apparatus (e.g.: a timer/a performance system), these apparatus do not implement the process step rather these apparatus are merely objects on which the method operates.

Based upon consideration of all of the relevant factors with respect to the claim as a whole, claim(s) 1, 4-8 held to claim an abstract idea, and is therefore rejected as ineligible subject matter under 35 U.S.C. § 101. The rationale for this finding is explained below:

- Insufficient recitation of a machine or transformation.
- Involvement of machine, or transformation, with the steps is merely nominally, insignificantly, or tangentially related to the performance of the steps, e.g., data gathering, or merely recites a field in which the method is intended to be applied.
- Machine is generically recited such that it covers any machine capable of performing the claimed step(s).
- Machine is merely an object on which the method operates.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 4-8 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for some repetition of the method such that the pint of efficiency is increase to a further new point of efficiency, does not reasonably provide enablement for the maximum value of the every repetition of the method such that the pint of efficiency is increase to a further new point of efficiency. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. In this particular case,

the claim limitation of claim 1 seems to require that in each repetition of training method the subject's point of efficiency would always increase a further new point of efficiency. It is possible in certain condition (e.g.: extreme exhaustion) that the subject would no longer be able to increase his/her point of efficiency.

7. Claims 1, 4-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In this particular case, the specification is silent on how to determine the point of efficiency. However, the specification is silent on the algorithm or method that can be used by one of ordinary skilled in the art to determine the "state of accommodation" of a training subject. Claim 1 requires the limitation of "determining a range of tolerance, using the control system, surrounding the initial measurement of the first parameter." The word determining or determine can be defined as *"to find out or come to a decision about by investigation, reasoning, or calculation."* However, the specification is silent on the algorithm or method that can be used by one of ordinary skilled in the art to determine the "state of accommodation" of a training subject. The specification mentions that the tolerance can be set at 2%, however, it does not arrive to that value by any reasoning and/or calculation. While, the applicant may have enablement by setting the physical parameter at plus or minus 2%; the applicant has not shown enabling support for determining the physical parameter. Furthermore, the physical parameter includes multiple parameters (e.g.: heart rate, blood pressure, turnover rate and etc). It is unclear on how one of ordinary skilled in the art can determine range of tolerance for any of these parameters.

8. Claims 1, 4-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this case, the limitation of "a point of efficiency" is defined twice in

claim 1 (see line 10 for the first definition and line 14 for the second definition). As such, the examiner is unable to determine which limitation should be used to determine the point of efficiency.

9. Claims 1, 4-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 recites the limitation "the method of training the trainable subject" in the last step of claim limitation 1. There is insufficient antecedent basis for this limitation in the claim. Furthermore, it is unclear if the applicant meant repeating the training method of claim 1 or repeats the "training the trainable subject" limitation in line 8 of claim 1.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 1, 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al (NPL) and in view of Kindermann et al (NPL), in view of Anderson US 4,463,764 and further in view of Amano et al US 5,941,837**

Claims 1: The Yoshida et al reference provides a teaching of:

- providing a performance system (see page 224 "Monark bicycle ergometer");
- measuring an initial measurement of a first parameter of a trainable subject (see page 224 paragraph 4 "... ECG, blood pressure, spirometry ...");

- providing a control system for controlling a second parameter, wherein the second parameter is a parameter of the performance system (see page 224 "... 25 watts of incremental loading ...").
- training the trainable subject within the rate of tolerance of the initial measurement (see page 224 paragraph 5).
- repeating the method of training the trainable subject using the performance system so the maximum values of the second parameter at least of increases or decreases each repetition of repetition of the method such that the point of efficiency is increased to further new points of efficiency (see page 225 "Training Regimen" and page 228-229)

The Yoshida reference is silent on the method of starting a timer to measure an elapsed time of a given activity; stopping the timer, using the control system, when the current measurement of the first parameter is outside of the range of tolerance; recording a length of time in which the trainable subject remained in the state of accommodation, until the current measurement of the first parameter is outside the range of tolerance. However, the Anderson reference provides a teaching of starting a timer to measure an elapsed time of a given activity; stopping the timer, using the control system, when the current measurement of the first parameter is outside of the range of tolerance; recording a length of time in which the trainable subject remained in the state of accommodation, until the current measurement of the first parameter is outside the range of tolerance (see Anderson col. 12:50 -60 and 13:30-55). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of starting a timer to measure an elapsed time of a given activity; stopping the timer, using the control system, when the current measurement of the first parameter is outside of the range of tolerance; recording a length of time in which the trainable subject remained in the state of accommodation, until the current measurement of the first parameter is outside the range of

tolerance, as taught by Anderson, since it would allow the system accurately record and display the physical's parameter of the training subject.

The Yoshida reference is silent in determining, using the control system, for the given activity, a point of efficiency of the trainable subject by measuring the first parameter of the trainable subject, the point of efficiency being the maximum value of the second parameter whereby a state of accommodation is maintained with respect to the first parameter, wherein the point of efficiency is determined by repeatedly increasing stress on the trainable subject by controlling the second parameter and then measuring a current measurement of the first parameter of the trainable subject, the current measurement measured after the initial measurement and before the timer is stopped, until just prior to the trainable subject no longer being able to accommodate additional stress and entering a state of inefficiency or exhaustion causing the first parameter to vary, wherein a rate of the variance of the first parameter at least one of increases and decreases with respect to the second parameter. However, the Kindermann reference provides a teaching of determining, using the control system, for the given activity, a point of efficiency of the trainable subject by measuring the first parameter of the trainable subject, the point of efficiency being the maximum value of the second parameter whereby a state of accommodation is maintained with respect to the first parameter, wherein the point of efficiency is determined by repeatedly increasing stress on the trainable subject by controlling the second parameter and then measuring a current measurement of the first parameter of the trainable subject, the current measurement measured after the initial measurement and before the timer is stopped, until just prior to the trainable subject no longer being able to accommodate additional stress and entering a state of inefficiency or exhaustion causing the first parameter to vary, wherein a rate of the variance of the first parameter at least one of increases and decreases with respect to the second parameter (see Kindermann page 29). Therefore, it would have been obvious to one of ordinary skilled in the art to include the

feature of determining, using the control system, for the given activity, a point of efficiency of the trainable subject by measuring the first parameter of the trainable subject, the point of efficiency being the maximum value of the second parameter whereby a state of accommodation is maintained with respect to the first parameter, wherein the point of efficiency is determined by repeatedly increasing stress on the trainable subject by controlling the second parameter and then measuring a current measurement of the first parameter of the trainable subject, the current measurement measured after the initial measurement and before the timer is stopped, until just prior to the trainable subject no longer being able to accommodate additional stress and entering a state of inefficiency or exhaustion causing the first parameter to vary, wherein a rate of the variance of the first parameter at least one of increases and decreases with respect to the second parameter, as taught by Kindermann, in order to provide an effective training regimen to increase the subject anaerobic threshold (see page 26).

The Yoshida reference is silent in determining a range of tolerance using the control system surrounding the initial measurement of the first parameter. However, the Amano reference provides a teaching of determining a range of tolerance using the control system surrounding the initial measurement of the first parameter (see col. 12:53-68). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of determining a range of tolerance using the control system surrounding the initial measurement of the first parameter, as taught by Amano, in order to insure that the subject is operating at a safe level during the exercise (see col. 8:45-55).

Claim 4-6: The Yoshida reference provides a teaching of the first parameter is a physical parameter and the first parameter is selected from chemical activity profile and VO₂ (see page 224 VO₂max, VO₂ and heart rate “Incremental exercise test”).

Claim 7: The Yoshida reference provides a teaching of first parameter is selected is observed by a signal selected from physical motion (see heart rate).

Claim 8: The Yoshida reference provides a teaching wherein the trainable subject selected from the group of a human (see page 224 “... Thirteen healthy male college students ...”).

Response to Arguments

12. Applicant's arguments filed 02/18/2011 have been fully considered but they are not persuasive.

13. The rejection of claims 1 and 5-6 under 35 U.S.C 112, first paragraph, have been withdrawn. However, the amendment causes a new set of rejection under 35 U.S.C 112 first paragraph.

14. With respect to applicant's argument that the Yoshida reference teaches away from the Kindermann, Anderson and Amano references. However, a persuasive teaching away argument one would need to show a disclosure that criticize, discredit, or otherwise discourage the solution claimed. However, neither of the Yoshida, Kindermann, Anderson and Amano reference shows a disclosure that criticize, discredit and discourage the solution claimed. As such, the examiner takes the position that the applicant's argument is not persuasive and the rejection should be maintained.

15. The applicant argued that the Yoshida reference does not provide a teaching of “repeating the method of training the subject using the performance system so the length time whereby the state of accommodation is maintained at least one of increase and decreases each repetition of the method such that a value of the point of efficiency is at least one of longer length of time and a shorter time after another repetition of the method.” The applicant argued that since the Yoshida reference do not actually show an increase in time of the state of

accommodation, the Yoshida reference should not be used as a reference for the rejection of claims 1 and 5-6. The examiner respectfully disagrees. The current limitation of “repeating the method of training the subject using the performance system so the length time whereby the state of accommodation is maintained”, does not require that the length of time actually increased rather it just require that one of ordinary skilled in the art would have some belief that the subject would be able to increase the length of time whereby the state of accommodation can be maintained. In this particular case, the examiner takes the position that decrease of physiological parameter after the training regiment would cause the test subject to increase the length time whereby the state of accommodation is maintained (see Yoshida page 228 paragraph 1-5).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT J. UTAMA whose telephone number is (571)272-1676. The examiner can normally be reached on 9-5:30 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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